Tauranga City

Planting guide

STREET TREES AND GARDENS

STREET TREES

STREET AND RESERVE GARDENS

APPENDIX

Planting guide - STREET TREES

Introduction

Trees are a collection of living entities that together contribute to a city's identity, form and well being. Trees contribute to the city environment in many ways. They can help to reduce traffic noise, supply oxygen, absorb carbon dioxide, increase property values and provide visual amenity and shade.

Being a significant resource for Tauranga City, the trees that are on public land require careful management and stewardship. Tauranga City's burgeoning population and urban intensification mean the space for trees on private land is under pressure. That makes it even more important to grow reasonable sized trees in public spaces.

It is especially important that appropriate species are selected for each public space. Inappropriate species can damage infrastructure and generate excess maintenance or replacement costs.

Appropriate species selection will maximise the benefits the tree provides as well as reducing the long term cost on the ratepayer.

Why this guide was developed

Without good planning, the planting and management of trees on public space can occur in an adhoc manner with the resulting tree cover lacking strength and cohesion. The intent of the Planting Guide – Street Trees is to foster coherent and sustainable street tree plantings. It recommends use of trees that are tolerant of the environmental conditions of their site, have low maintenance needs, have long lives, and retain their attractiveness into their maturity.

Background to the guidelines

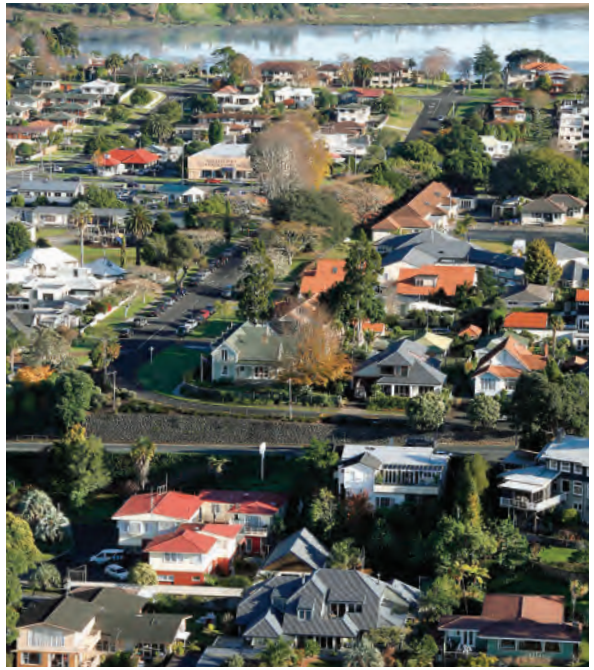
Tauranga City Council's Vegetation Strategy (Growing Tauranga Green) identifies the need to develop guidelines for street tree planting. The community and council staff have identified that in the past inappropriate species have been planted in some sites.

The development of this planting guide helps to achieve other strategic objectives (outlined in the Integrated Transport Strategy, Urban Design Strategy, and City Centre Strategy) relating to the design of roads and living streets principles, and maintaining on-street landscaping appropriate to the environment.

Who this guide is for

This document is to be used as guide for the planting of street trees and is referenced as such by the Infrastructure Development Code. It is intended for landscape architects, developers, contractors, council staff and tree suppliers. It will assist with the selection of replacement trees or new street trees in existing areas, as well as landscape design of road corridors in green field subdivisions.

Note: While this document has been produced to assist with the selection of street tree species it is a guide only and the final decision as to the species to be used in any situation rests with the Tauranga City Council Arborist.



How to use the guide

The city has been divided into thirteen character areas based on tree themes, tree types and land use patterns.

- Tree themes have been identified for each character area based on the most commonly occurring street tree species and by considering featured trees in those areas. Species that will help continue to achieve these themes have been promoted for use within the area, along with specific species for use under power lines.
- The arterial and collector roads for each area have been identified and for the purpose of this document are referred to as **significant roads**. The map in Appendix One shows the location of the significant roads across the city. These are the roads most travelled by the residents of the city. Structured tree cover along these routes will reinforce the identity of the character areas and the city as a whole.

Artist's impression of a well set out streetscape

- All other roads are described as **minor roads**; these are shown on the area map but are not identified by name. These roads have a wider selection of species to choose from to accommodate a range of planting situations.
- While a range of species is given for each character area it is envisaged that any one street would ideally have no more than two to three different species planted on it. This is to ensure that the tree cover does not become fragmented in appearance.

This document does not extend to private roads though the council is happy for it to be used as a reference guide for this purpose.

It is intended that this will be a living document and will be reviewed on a regular basis. Where it becomes apparent that a tree species is not appropriate to an area, or if more suitable species become available, then the recommended species will be reassessed as appropriate. Any proposed changes will be passed through a robust assessment scheme to ensure suitability.

CHARACTER AREA:

Otumoetai / Matua

Description

The residential development of this area occurred primarily in the 1970s and 1980s. This area has reasonably wide berms with overhead power lines on one or both sides of the road. Many of the streets feature well established trees.

The most common street tree species in this area are Silk tree *(Albizia julibrissin)*, Silver birch (*Betula pendula*), Indian bead tree (*Melia azadarach*), Kowhai (*Sophora tetraptera*) and Jacaranda (*Jacaranda mimosaefolia*).

The tree species that are features of the area are the Yew trees (*Taxus baccata*) on Kings Ave, Wonder trees (*Idesia polycarpa*) in Idesia Grove in Matua and the Willow myrtle (*Agonis flexuosa*) in Brookfield.

Preferred species for significant roads

Levers Road
Acer japonica (Japanese maple)

Ngatai Road
Replace *Betula pendula* (Silver birch) by power lines with *Cornus kousa* (Kousa dogwood)

Otumoetai Road between Ngatai Rd and Hinewa Rd
Prunus x yedoensis 'Awanui' (Yoshino cherry)

Bellevue Road

Jacaranda mimosaefolia (Jacaranda), *Acer japonica* (Japanese maple) under power lines

Preferred species for minor roads

Idesia Grove
Idesia polycarpa: Wonder tree

Trees can provide colour

All other minor roads

Cornus kousa: Kousa dogwood

Arbutus unedo: Strawberry Tree

Magnolia little gem: Southern magnolia

Pyrus calleryana: Callary Pear

Agonis flexuosa: Willow myrtle

Prunus x yedoensis 'Awanui': Yoshino cherry

Liquidambar styraciflua: Sweet gum

Jacaranda mimosaefolia: Jacaranda

Acer buergerianum: Trident maple

Metasequioa glyptostroboides: Dawn redwood

Preferred species for use under power lines

Cornus kousa: Kousa dogwood

Arbutus unedo: Strawberry Tree

Magnolia little gem: Southern magnolia

Acer japonica: Japanese maple

Yew trees, Matua

CHARACTER AREA:

Judea

Description

The residential development of this area occurred primarily in the 1960s. This area has reasonably wide berms with overhead power lines on one or both sides of the road. Some of these streets feature well established trees.

This area also contains a relatively small commercial/industrial area that has few street trees.

The most common street tree species in this area are Silk tree (*Albizia julibrissin*), Silver birch (*Betula pendula*), Norfolk Island Hibiscus (*Lauganaria pattersonii*) and Sweet gum (*Liquidambar styraciflua*)

The tree species that are features of the area are the Plane trees (*Platanus x hispanica*) on Waihi Road.

Preferred species for significant roads

Waihi Road

Agathis australis: Kauri

Bellevue Road

Jacaranda mimosaefolia (Jacaranda), *Acer japonica* (Japanese maple) under power lines

Preferred species for minor roads

Agathis australis: Kauri

Podocarpus henkelii: Yellow wood

Metasequioa glyptostroboides: Dawn redwood

Acer japonica: Japanese maple

Preferred species for use under power lines

Magnolia little gem: Southern magnolia

Olea 'El Greco': Olive

Good species selection

Poor species selection

CHARACTER AREA:

Tauranga City Centre

Description

This is one of the oldest areas of the city with very well established street trees such as the Pohutukawas (*Metrosideros excelsa*) on Brown Street. There are also many public and private sites in this area that contain trees that are well recognised and historically linked to the city such as the Elms Mission site, the Monmouth Redoubt and the Aspen tree (*Populus virginiana*) on the corner of Willow and McLean Streets.

The species for this area should be Pohutukawa (*Metrosideros excelsa*), Casuarinas (*Casuarina cunninghamii*) and Norfolk pine (*Araucaria heterophylla*).

The most common street tree species in this area are Titoki (*Alectryon excelsus*), Silver birch (*Betula pendula*), Kowhai (*Sophora microphylla*) and Queen Palm (*Syagrus romanzoffiana*).

The tree species that are features of this area are the Puriri (*Vitex lucens*) on Cameron Road, Pohutukawas (*Metrosideros excelsa*) on Brown Street and the Plane trees (*Platanus x hispanica*) on Devonport Road.

The Tauranga City Centre has had recent bird problems which have been exacerbated by the density of some of the tree species present, namely Flame tree (*Brachychiton acerifolia*) and Titoki (*Alectryon excelsus*). A move to deciduous or relatively open natured trees will help alleviate this problem.

Tauranga City Centre: Grey Street

Queen palms (*Syagrus romanzoffiana*) are an integral component of the look of the CBD and should be retained or promoted as replacements for trees where room for lateral growth is limited.

Replacement tree species will include Melia (*Melia azardarach*), Katsuras (*Cercidiphyllum japonicium*) and Frangipani (*Hymenosporum flavum*).

The Tauranga City Centre water front is currently being redesigned and will draw some tree species from this document but will not be limited by the selections that have been made as consideration will need to be given to coastal-hardy species for the exposed areas.

Preferred species for significant roads

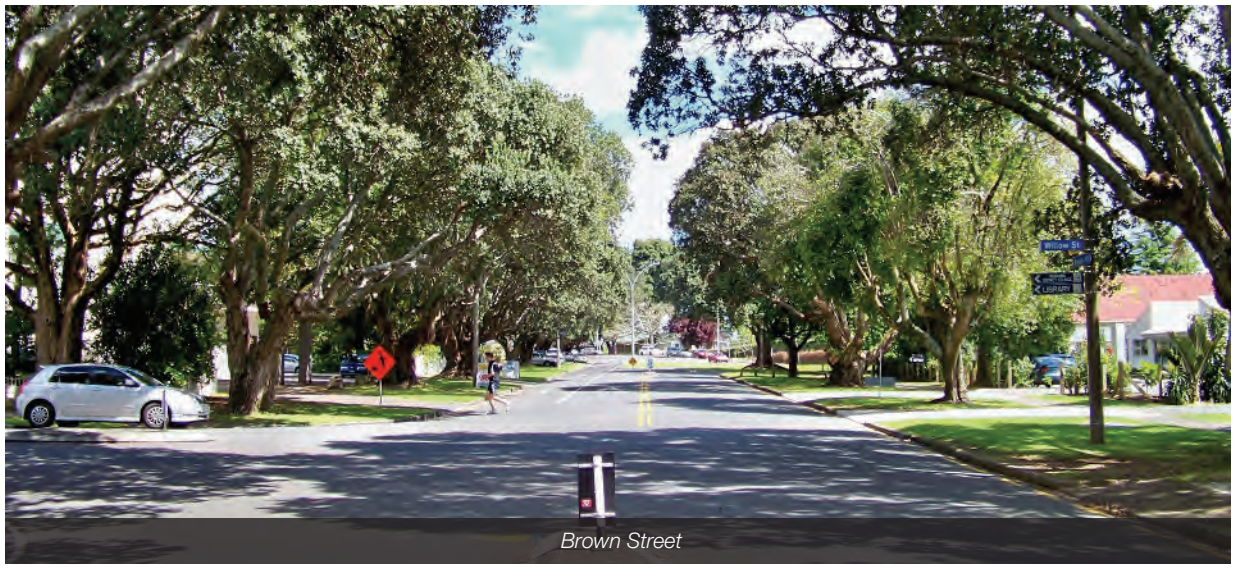
Cameron Road (Brown Street to Elizabeth Street) *Vitex lucens*: Puriri

Cameron Road (Elizabeth Street to 11th Ave) *Jacaranda mimosaefolia* (Jacaranda) and *Liriodendron tulipifera fastigiatum* (Upright Tulip tree).

Preferred species for minor roads

Mission Street
Alectryon excelsus: Titoki

Brown Street
Metrosideros excelsa: Pohutukawa



Brown Street

All other minor roads

Alectryon excelsus: Titoki

Albizia julibrissin: Silk tree

Carpinus betulus: Hornbeam

Sophora tetraptera: Kowhai

Vitex lucens: Puriri

Cercidiphyllum japonicum: Katsura

Preferred species for use under power lines

Magnolia 'star wars': Magnolia 'star wars'

Michelia 'bubbles': Michelia 'bubbles'

Azara microphylla: Chin-chin

CHARACTER AREA:

Tauranga Central

Description

This is an older area of Tauranga with generally wide berms, large trees of European origin and overhead power lines on one or both sides of the road.

This character area also includes the industrial area of Maleme Street and Glen Lyon Ave.

The character of Greerton has been established through the historic and recent planting of Prunus species (Cherry trees); this will be maintained and enhanced through the continued planting of appropriate prunus species.

The most common street tree species in this area are Silver birch (*Betula pendula*), Camellias (*Camellia species*), Kowhai (*Sophora tetraptera*) and Cherry trees (*Prunus species*).

The tree species that are features of the area are New South Wales Christmas tree (*Ceratopetalum gummiferum*), Banksia (*Banksia integrifolia*), Queensland box (*Lophostemon conferta*) and English Elm (*Ulmus procera*).

Preferred species for significant roads

Cameron Road (11th Ave to Cornwall Street) *Jacaranda mimosaefolia* (Jacaranda) and *Liriodendron tulipifera fastigiatum* (Fastigate Tulip tree) Cornwall Street to Pooles Road *Prunus x yedoensis 'Awanui'* (Yoshino cherry)

Devonport Road

Carpinus betulus fastigata: Fastigate Hornbeam, *Michelia doltsopa*: Sweet Michelia, *Albizia julibrissin*: Silk tree

Fraser Street

Replace *Betula pendula* (Silver birch) with *Quercus robur fastigiata* (Fastigate English Oak)

Preferred species for minor roads

Grace Road

Ceratopetalum gummiferum: New South Wales Christmas tree

Gordonia axillaris: Fried Egg tree

Albizia julibrissin: Silk tree

Ceratopetalum gummiferum: New South Wales Christmas tree

Prunus x yedoensis 'Awanui': Yoshino cherry

Carpinus betulus: Hornbeam

Agathis australis: Kauri

Pyrus calleryana: Callary pear

Preferred species for use under power lines

Prunus 'okame': Okame cherry

Prunus shirotae 'Mt Fuji': Mount Fuji cherry

Ginkgo biloba 'jade butterflies": Dwarf Ginkgo

Garrya elliptica: Silk-tassel Bush

Malus ioensis plena: Pink Flowered Crab Apple

Denominational cemeteries are part of the character of this area

Ceratopetalum gummiferum

CHARACTER AREA:

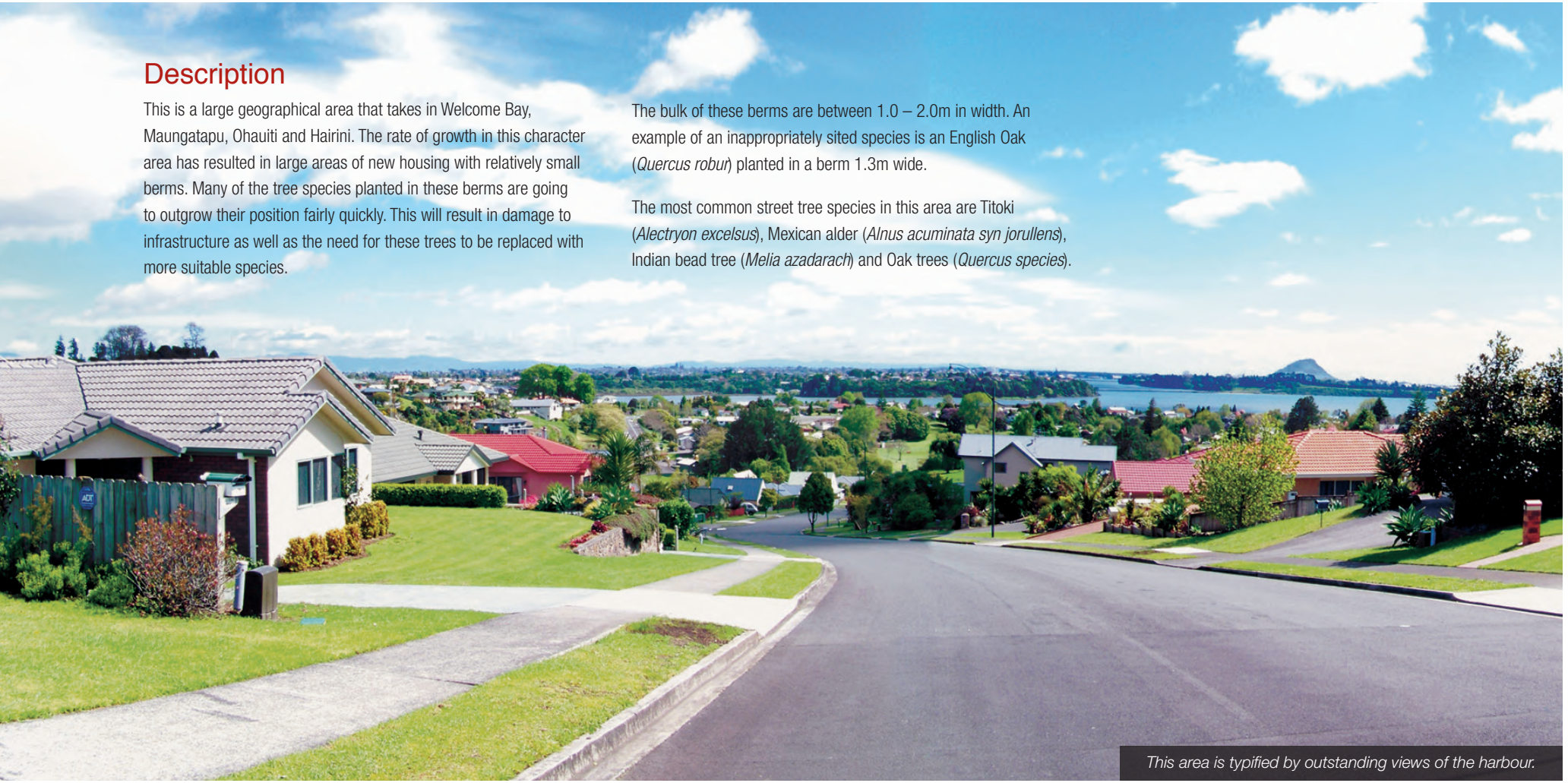
Tauranga East

Description

This is a large geographical area that takes in Welcome Bay, Maungatapu, Ohauiti and Hairini. The rate of growth in this character area has resulted in large areas of new housing with relatively small berms. Many of the tree species planted in these berms are going to outgrow their position fairly quickly. This will result in damage to infrastructure as well as the need for these trees to be replaced with more suitable species.

The bulk of these berms are between 1.0 – 2.0m in width. An example of an inappropriately sited species is an English Oak (*Quercus robur*) planted in a berm 1.3m wide.

The most common street tree species in this area are Titoki (*Alectryon excelsus*), Mexican alder (*Alnus acuminata syn jorullens*), Indian bead tree (*Melia azadarach*) and Oak trees (*Quercus species*).



This area is typified by outstanding views of the harbour.

Preferred species for significant roads

Maungatapu Road
Sophora tetraptera: Kowhai
Stenocarpus sinuatus: Firewheel Tree

Welcome Bay Road
Metrosideros excelsa: Pohutukawa
Alectryon excelsus: Titoki
Metrosideros 'scarlet pimpernel': Pohutukawa (under power lines)

Poike Road
Beilschmedia taraire: Taraire

Ohauiti Road
Beilschmedia taraire: Taraire

Preferred species for minor roads

Alectryon excelsus: Titoki
Lagerstroemia indica: Crepe myrtle
Tilia oliveri: Oliver's lime
Stewartia pseudocamellia or S. monadelpha: False camellia
Quercus rubra 'Akatere': Columnar Red Oak
Beilschmedia taraire: Taraire
Tilia tomentosa orbicularis: Silver lime
Phyllocladus trichomanoides: Tanekaha

Preferred species for use under power lines

Cornus kousa: Kousa dogwood
Lagerstroemia indica: Crepe myrtle
Ginkgo jade butterflies: Dwarf ginkgo

The bark of some trees is a feature. Pictured Stewartia pseudocamellia

CHARACTER AREA:

Tauranga West

Description

This takes in the area commonly referred to as Bethlehem as well as Westridge. Much of this area has been developed into residential housing in recent years. It typically has wider berms than other areas of the city and the houses tend to be larger than average. The larger tree species that have been planted provide a good sense of scale to the area.

The most common street tree species in this area are Titoki (*Alectryon excelsus*), Oak trees (*Quercus species*), Sweet gum (*Liquidambar styraciflua*), and Yoshino cherry (*Prunus x yedoensis 'Awanui'*).

The tree species that are features of the area are the Monterey cypress (*Cupressus macrocarpa*) at 168 Moffat Road; one of the trees on this property is the tallest of its kind in the southern hemisphere.

The trees at Bernadene are features of this area

Preferred species for significant roads

Beaumaris Boulevard

Quercus palustris: Pin oak

Tilia platyphyllos: Common Lime

Bethlehem Heights

Prunus x yedoensis 'Awanui': Yoshino cherry

Moffat Road

Quercus coccinea: Scarlet Oak

Preferred species for minor roads

St Andrews Drive

Lophostemon conferta: Queensland box

Tristaniopsis laurina: Water gum

Westridge Drive

Quercus palustris: Pin oak

Prunus rhexii: Sour Cherry

Tilia platyphyllos: Common Lime

Tilia platyphyllos laciniata: Cut leaf lime (smaller variety)

Tristaniopsis laurina: Water gum

Prunus x yedoensis 'Awanui': Yoshino cherry

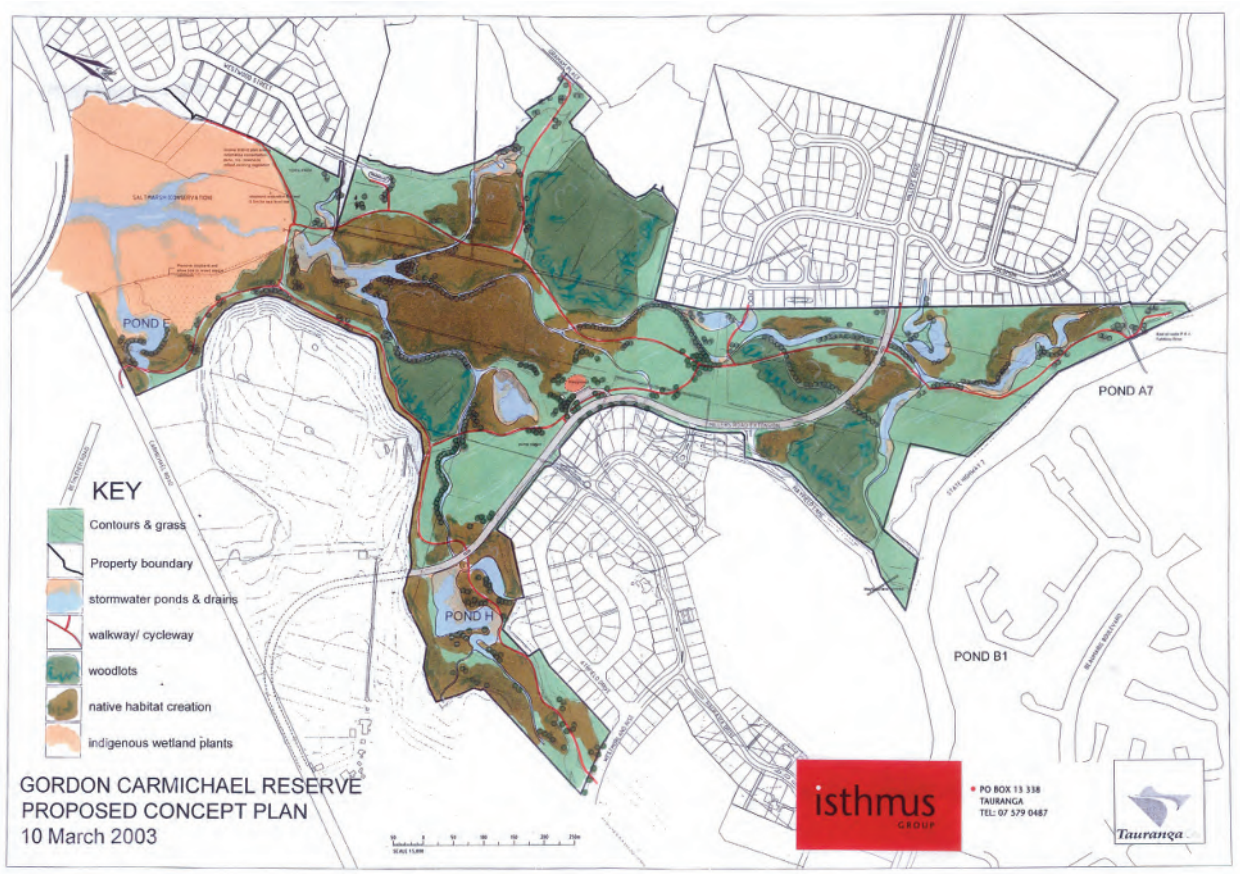
Alectryon excelsus: Titoki

Quercus robur fastigiatum: Fastigate English oak

Preferred species for use under power lines

Prunus 'okame': Okame cherry

Malus ioensis plena: Pink Flowered Crab Apple



CHARACTER AREA:

Tauranga South

Description

This area includes Pyes Pa, The Lakes and the IMF industrial development and has been intensively developed in recent years. As a result the berm size is generally small.

There is very little scope for trees on this section of Oropi Road; once this area is more intensively developed the situation may change.

The most common street tree species in this area are Titoki (Alectryon excelsus), Chinese elm (Ulmus parvifolia), Pohutukawa (Metrosideros excelsa) and Oak trees (Quercus species).

Preferred species for significant roads

Cheyne Road

Alectryon excelsus: Titoki

Prunus 'Amanogawa' (Japanese Flowering Cherry) in centre island and corner gardens.

Pyes Pa

Cornus nuttallii: Pacific dogwood

Preferred species for minor roads

- *Michelia doltsopa 'Silver Cloud'*: Sweet Michelia
- *Alectryon excelsus*: Titoki
- *Hedycarya arborea*: Pigeon wood
- *Cornus nuttallii*: Pacific dogwood
- *Acer palmatum*: Japanese maple
- *Malus ioensis plena*: Pink Flowered Crab Apple

Preferred species for use under power lines

- *Magnolia 'little gem'*: Southern magnolia
- *Malus ioensis plena*: Pink Flowered Crab Apple
- *Cornus kousa*: Kousa dogwood

Titoki foliage

Intensive development requires considered species selection

CHARACTER AREA:

Mount Maunganui North

Description

This area receives a high number of tourist visitors and is the gateway for visiting cruise ship passengers.

The most common street tree species in this area are Phoenix palm (*Phoenix canariensis*), Norfolk pine (*Araucaria heterophylla*), Washingtonia palm (*Washingtonia robusta*) and Pohutukawa (*Metrosideros excelsa*).

The tree species that are features of the area are Phoenix palm (*Phoenix canariensis*), Norfolk pine (*Araucaria heterophylla*) and Pohutukawa (*Metrosideros excelsa*).

Preferred species for significant roads

The Mall
Phoenix canariensis: Phoenix palm
Araucaria heterophylla: Norfolk pine

Marine Parade
Araucaria heterophylla: Norfolk pine
Phoenix canariensis: Phoenix palm

Iconic Mauao

Preferred species for minor roads

Maunganui Road (Pacific Ave to Rata Street)
Jacaranda mimosaefolia: Jacaranda

Washingtonia robusta: Washingtonia palm

Metrosideros excelsa: Pohutukawa

Meryta sinclairii: Puka

Myrsine salicina: Toro

Preferred species for use under power lines

Metrosideros 'scarllet pimpernell': Pohutukawa

Olea 'el greco': Olive

Pohutukawa flowers

Norfolk pines: a landscape feature

CHARACTER AREA:

Mount Maunganui East

Araucaria columnaris

Description

This area has a mixture of older and relatively new areas of housing development; the older areas have overhead services present.

The most common street tree species in this area are Red flowering gum (*Eucalyptus ficifolia*), Pohutukawa (*Metrosideros excelsa*) and Olive (*Olea europaea*).

The tree species that features of the area are Norfolk pine (*Araucaria heterophylla*), Phoenix palm (*Phoenix canariensis*) and Pohutukawa (*Metrosideros excelsa*).

Preferred species for significant roads

Maunganui Road
Metrosideros excelsa: Pohutukawa
Olea europaea: Olive

Oceanbeach Road
Metrosideros excelsa: Pohutukawa
Olea europaea: Olive

Golf Road
Metrosideros excelsa: Pohutukawa
Backhousia citriodora: Lemon myrtle

Girven Road
Backhousia citriodora: lemon myrtle
Myrsine salicina: Toro

Maranui Street
Metrosideros excelsa: Pohutukawa

Preferred species for minor roads

- *Metrosideros excelsa*: Pohutukawa
- *Backhousia citriodora*: Lemon myrtle
- *Myrsine salicina*: Toro
- *Olea europaea*: Olive
- *Araucaria heterophylla*: Norfolk pine
- *Araucaria columnaris*: Cook Island pine
- *Eucalyptus leucoxylon rosea*: Yellow gum

Preferred species for use under power lines

- *Olea 'el greco'*: Olive
- *Metrosideros 'scarllet pimpernell'*: Pohutukawa

Link between streets and the coastal reserve

CHARACTER AREA:

Mount Maunganui Industrial

Description

This is an industrial area with a small pocket of residential housing adjacent to Blake Park. It is a difficult area for tree growth due to pollution, high rates of vandalism and only a small number of residents who could provide some care to street trees.

The most common street tree species in this area are Pohutukawa (*Metrosideros excelsa*), Plane tree (*Platanus x hispanica*), Olive (*Olea europaea*) and Bull Bay (*Magnolia grandiflora*).

Preferred species for significant roads

Totara Street
Metrosideros excelsa: Pohutukawa
Platanus x hispanica: Plane tree

Trees reduce air pollution

Preferred species for minor roads

- *Metrosideros excelsa*: Pohutukawa
- *Backhousia citriodora*: Lemon myrtle
- *Myrsine salicina*: Toro
- *Olea europaea*: Olive
- *Araucaria heterophylla*: Norfolk pine
- *Araucaria columnaris*: Cook Island pine
- *Magnolia grandiflora*: Bull Bay

Preferred species for use under power lines

- *Metrosideros 'scarllet pimpernell'*: Pohutukawa
- *Magnolia 'little gem'*: Southern magnolia
- *Myrsine salicina*: Toro

Magnolia grandiflora thrive in harsh conditions

CHARACTER AREA:

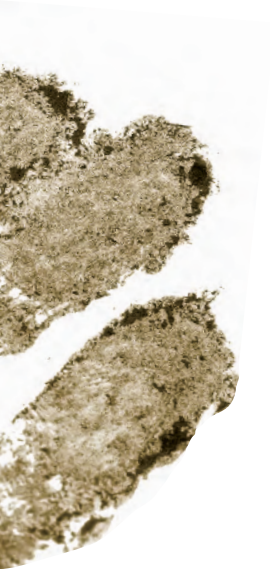
Matapihi

Description

This area contains the small commercial area on Owens Place, an area of residential housing and a large rural area. The berms in the residential area are relatively small.

The most common street tree species in this area are Sweet gum (*Liquidambar styraciflua*), Pin Oak (*Quercus palustris*) and Pohutukawa (*Metrosideros excelsa*).

The tree species that are features of the area are the established Pines (*Pinus radiata*) and Macrocarpas (*Cupressus macrocarpa*) in the rural areas and along the golf course boundary.



A good looking tree in the streetscape. Closer inspection shows multiple repairs to the footpath and a damaged kerb. This is a result of a large growing tree planted in a one meter wide strip of grass, not a good long term result for the ratepayer. This tree is only 17 years old.

Alberta magna flowers

Preferred species for significant roads

Matapihi Road

Nestegis lanceolata: White maire

Preferred species for minor roads

Russley Drive

Nestegis lanceolata: White maire

Alberta magna: Natal flame tree

Nestegis lanceolata: White maire

Alberta magna: Natal flame tree

Calodendrum capense: Cape chestnut

Koelreuteria paniculata: Golden rain tree

Preferred species for use under power lines

Myrsine salicina: Toro

Alberta magna: Natal flame tree

CHARACTER AREA:

Papamoa East

Palm Beach Boulevard

Description

This is a large geographical area taking in the coastal strip from Sandhurst Drive to the end of Papamoa Beach Road. The area has been intensively developed in recent years. The berm size is generally small. The older residential areas have overhead services present.

The most common street tree species in this area are Karaka (*Corynocarpus laevigatus*), Olive (*Olea europaea*) Pohutukawa (*Metrosideros excelsa*) and Washingtonia palm (*Washingtonia robusta*).

The tree species that are features of the area are the Pine trees (*Pinus radiata*) along the beach front and at Papamoa Domain and the Monterey cypress (*Cupressus macrocarpa*) and Gum trees (*Eucalyptus species*) in the Palm Beach stormwater reserve.

Preferred species for significant roads

Domain Road
Metrosideros excelsa: Pohutukawa
Banksia integrifolia: Banksia

Gravatt Road
Magnolia grandiflora: Bull bay

Evans Road
Metrosideros excelsa: Pohutukawa
Olea europaea: Olive

Parton Road
Metrosideros excelsa: Pohutukawa

Hardy tree species are essential in the coastal strip. Pictured Magnolia grandiflora

Preferred species for minor roads

Pacific View Road
Metrosideros excelsa: Pohutukawa

Metrosideros excelsa: Pohutukawa

Olea europaea: Olive

Alberta magna: Natal flame tree

Magnolia grandiflora: Bull bay

Magnolia 'little gem': Southern magnolia

Planchonella costata: Tawapou

Tristaniopsis laurina: Water gum

Preferred species for use under power lines

Alberta magna: Natal flame tree

Olea 'el greco': Olive

Magnolia 'little gem': Southern magnolia

CHARACTER AREA:

Papamoa West

Description

This is primarily a rural area that is likely to be intensively developed in the future; a portion of this area takes in the Papamoa east industrial area of Ashley Ave and Twin Oaks Drive.

The most common street tree species in this area are Alders (*Alnus species*), Golden totara (*Podocarpus totara 'aurea'*) and English Oak (*Quercus robur*).

Trees can soften the industrial landscape

Preferred species for significant roads

Parton Road

Metrosideros excelsa: Pohutukawa

Preferred species for minor roads

Metrosideros excelsa: Pohutukawa

Olea europaea: Olive

Alberta magna: Natal flame tree

Magnolia grandiflora: Bull bay

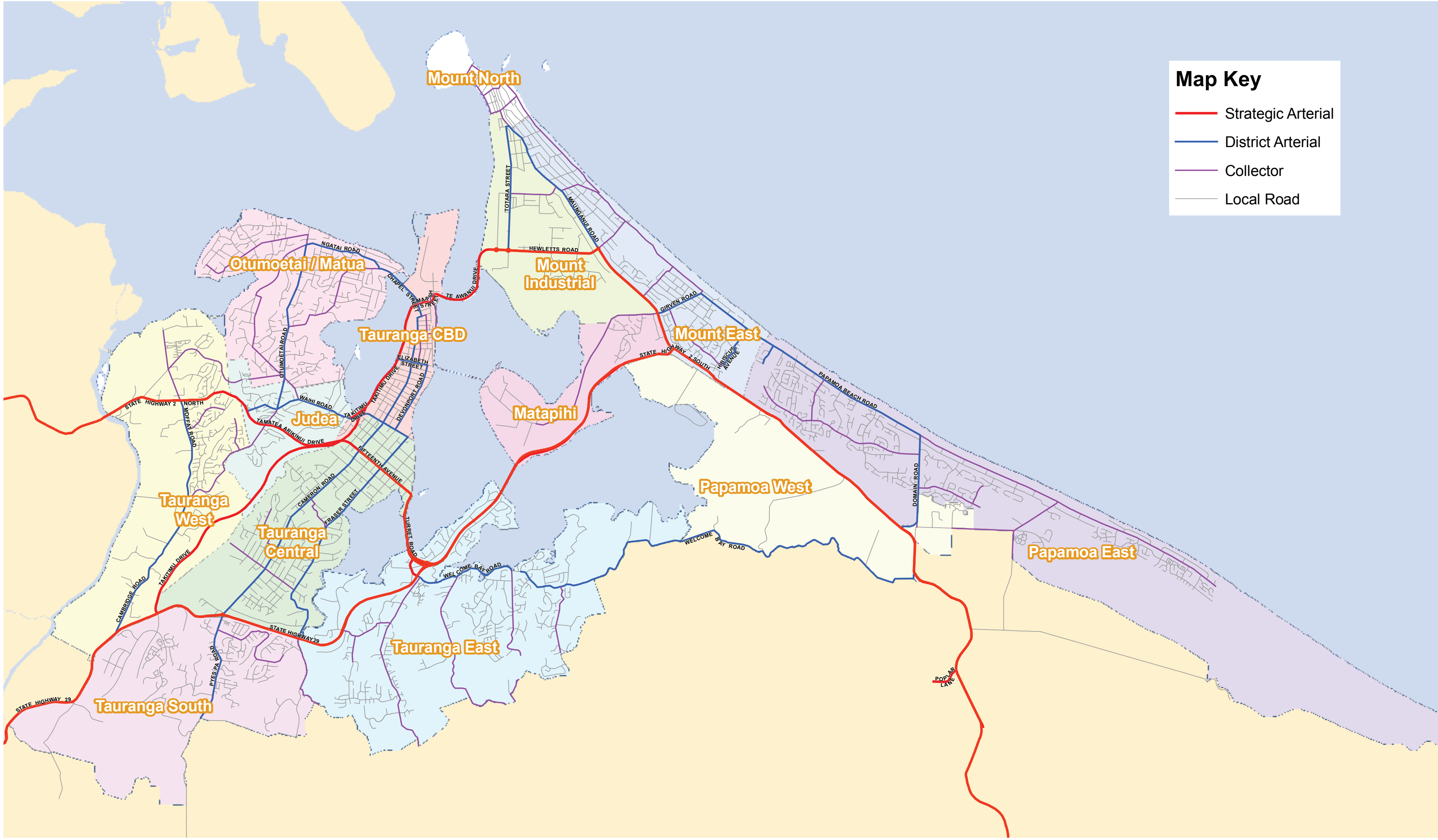
Magnolia 'little gem': Southern magnolia

Planchonella costata: Tawapou

Preferred species for use under power lines

N/A: All power lines should be underground in any new development.

Keep trees and underground services separated


Map Key
Strategic Arterial
District Arterial
Collector
Local Road
Mount North
Otumoetai / Matua
Mount Industrial
Tauranga CBD
Mount East
Judea
Matapihi
Tauranga West
Papamoa West
Tauranga Central
Papamoa East
Tauranga East
Tauranga South
NGATAI ROAD
HEWLETTS ROAD
TOTARA STREET
MAUNGANUI ROAD
GIRVEN ROAD
PAPAMOA BEACH ROAD
DOMAIN ROAD
WELCOME BAY ROAD
TURRET ROAD
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CAMERON ROAD
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CHAPEL STREET
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OTUMOETAI ROAD
WAIHI ROAD
TAMATEA ARIKINUI DRIVE
PYES PA ROAD
POPLAR LANE

Planting guide - STREET AND RESERVE GARDENS

Introduction

Street and reserve gardens throughout Tauranga City contribute to the overall streetscape and aesthetic feel of the city. As the city has grown there are clear differences in how areas have developed. In the early years of the city's growth minimal regard was given to public gardens in suburban spaces whereas in more recent times developers have used gardens to dress their developments for sale to prospective residents.

This variable level of service was raised as an issue when Tauranga City Council consulted on the Vegetation Management Strategy (Growing Tauranga Green) in 2006. These issues are now being addressed through the Open Space level of Service Policy 2009, the Best Practice Guide for Open Space, Council's Infrastructure Development Code (IDC) and the landscape plan approval process. The IDC places parameters around garden size, location and total area (m2) of gardens per development.

Street gardens will add colour and structure to arterial, feeder and collector roads.

The emphasis is on placement of street gardens along arterial, feeder and collector roads, where they provide the most impact and public benefit. The landscape plan approval process allows Council to review developers' landscape plans to ensure the green assets being delivered as part of the development process will be appropriately sized and located and that species selection is sound.

Reserve gardens provide the opportunity to create gardens on a larger scale to street gardens. Reserve gardens are generally structured to be low around their edges, rising in plant height to their centres; they may also incorporate reserve trees within their structure. Reserve gardens should be used to highlight main entrances into each reserve as well as provide an aesthetic backdrop to the reserve's high profile features like playgrounds and barbeques.

Why this guide was developed

Some street and reserve gardens have historically been developed with little input from Council. This has resulted in gardens that provide instant appeal and match the general trends of the day but are not necessarily suitable to the local environment and therefore are quite short lived. For the Council to continue to provide high quality and affordable street gardens that can survive a good length of life, this guide will provide information on the environmental and cultural aspects of different areas of the city and recommendations of plant species that work in these areas as well as identifying species that do not do well or are not desirable.

Reserve gardens can soften structures and break up the appearance of unsightly areas.

Who this guide is for

This document is to be used as guide for the planting of street and reserve gardens and is referenced as such by the Infrastructure Development Code. It is intended for landscape architects, developers, contractors, council staff and plant suppliers. It will assist with the selection of suitable plant species in existing areas, as well as landscape design of road corridors in green field subdivisions.

The plant lists provided in this guide are indicative only. Council accepts that other species not listed in the guide may be suitable and encourages all users to discuss the use of alternative species with Council.

It is intended that this will be a living document which will be reviewed on a regular basis. Where it becomes apparent that a plant species is not appropriate or if more suitable species become available then the recommended species will be reassessed as appropriate. Any changes that are to be made will be passed through a robust assessment scheme to ensure suitability.

How to use the guide

The city has been divided into four character areas:

- **Tauranga Central** – The older part of Tauranga with a number of historical sites and where future development is limited to infill. Plant species used in this area fall into the "traditional" category.
- **Tauranga Suburbs** - The fertile area of the city where development has spread out to land that was traditionally used for orchards and farms. There is still the potential for further urban spread in this area. Plant species will be used to reflect the new, modern feel that this area has.
- **Mount Maunganui** – A more moderate coastal climate due to water on both sides, where growth is limited to intensification.
- **Papamoa** – A very harsh coastal environment with poor soils and large urban growth potential.

Suitable plant options are limited in some areas due to the environmental conditions and this has influenced the recommendations in the guide.

Coastal hardy plants can add colour and be low maintenance

CHARACTER AREA:

Tauranga Central

This area is made up of Matua in the north to Greerton in the south and includes the suburbs of Otumoetai, Judea, Brookfield and Bellevue.

This area includes some of Tauranga's most historic sites such as The Elms, the Mission Cemetery, Brain Watkins House, the Gate Pa battle site and historic cemeteries.

The vegetation used in the street and reserve gardens in this area will reflect and enhance the history, heritage and visual amenity of the area.

Areas like Greerton have established street gardens with a clear theme that complement the area's history. The use of scented roses will be restricted to the Greerton main street area.

While the use of colourful annual plants is suggested below, their use is envisaged in CBD locations and on arterial roads only due to their high cost of maintenance.

Significant roads

Cameron Road
11th Avenue
15th Avenue
Fraser Street
Chadwick Road
Waihi Road
Otumoetai Road
Levers Road
Ngatai Road
Bellevue Road
Grange Road

Table of plants for street gardens

Preferred plants	Potential plants	Inappropriate plants
Hydrangea	Hemerocallis	Carex
Scented roses	Arthropodium	Berberis
Viburnum	Phormium cookianum cultivars	Pyracantha
Hibiscus	Hebes	Coprosma acerosa
Buxus	Loropetalum	Phormium tenax
Dianella	Ophiopogon	Rosemary
Leptinella	Liriope muscari	Lavender
Annuals	Kalmia latifolia	Cotoneaster
Nandina	Ilex sp.	Agapanthus
	Hellebores	
	Fuschia sp.	
	Gardenia	

Historic floral boat garden on The Strand

Greerton roses: a tourist attraction

Annuals used to highlight a park entrance

Yatton Park annual bed with shrub garden in background

Reserves

Reserve gardens should be used generally to highlight main entrances into neighborhood reserves as well as provide an aesthetic backdrop to the reserve's high profile features like playgrounds and barbeques.

Use gardens to complement shade trees with under plantings of various proven, do-well plants – not limited to any generic or colour theme, but with a purpose in making the display 'en masse'. Good examples are Berberis, Arthropodium, Astelia, Roses, Hydrangea, Mondo grass and Laurapetilums.

A noted central reserve garden is Yatton Park, which offers the best opportunity to provide for a range of botanical diversity with several micro-climates and spacious grounds. Currently featured are conifer beds, annual beds, a border garden and groves of various trees to provide structure and shade for the park. The location of Yatton Park between the Avenues and Greerton Village is the ideal site to develop more rambling gardens for passive or quiet recreational pursuits in a natural environment.

Table of plants for reserve gardens

Preferred plants	Potential plants	Inappropriate plants
Hydrangea	Daffodil beds	Coprosma robusta
Brachyglottis	Acaena purpurea	Coprosma repens
Asplenium bulbiferum	Buxus sempervirens	Coprosma acerosa
Astelia	Grisilenia lucida	Muelenbeckia
Hibiscus	Hemerocallis	Ground cover roses
Acuba japonica	Begonia tuberous	Agapanthus
Loropetalum	Ilex sp.	Phormium tenax
Viburnum	Berberis cultivars	Hedera
Veronica	Gardenia sp.	
	Chimonanthus praecox	
	Deutzia gracilis	
	Kolkwitzia amabilis	
	Kalmia latifolia	
	Daphne odora	
	Azalea sp.	
	Syringa sp.	

CHARACTER AREA:

Tauranga Suburbs

Gardens should compliment the surrounding streetscape

This area is made up of the suburbs of Bethlehem, Tauriko, The Lakes, Welcome Bay and Maungatapu. The area is characterised by relatively recent development in highly fertile areas, plant growth is strong and is reflected by well established residential gardens.

Due to climate and soil fertility this is a good area to trial species that may not have been used in the past due to concerns over their viability in certain conditions, or have been recently introduced into local production. Associated risks can be mitigated through mixing these species with proven performers.

Potential new species may be identified by looking at what is growing in residential gardens in similar neighbourhoods. Street gardens will usually have to survive slightly harsher conditions than the residential gardens due to lack of watering and the heat generated from the asphalt and concrete. If Acacia or Banksia shrubs are to be used careful consideration must be given to their growth characteristics.

Significant roads

- Maungatapu Road
- Welcome Bay Road
- Poike Road
- Ohauiti Road
- Beaumaris Boulevard
- Moffat Road
- Pyes Pa Road
- Lakes Boulevard
- Tarikura Drive
- Cheyne Road

Consider traffic line of site when selecting species and locating gardens

Table of plants for street gardens

Preferred plants	Potential plants	Inappropriate plants
Corokia varieties	Pimelia	Schleranthus
Coprosma varieties	Nandina	Juniper
Hebe varieties	Lomandra	Gardenia
Phormium cookianum – Dwarf varieties	Dianella	Ivy
Vibernum varieties	Liriope	Carex
Loropetalum	Plumbago	Agapanthus
Hemerocallis - Day Lillies	Pseudopanax shrubs	Astelia
Sophora ‘Dragons Gold’	Acacia shrubs	Phormium tenax
Grisilinea littoralis	Banksia shrubs	Acaena Purpurea
Liriope muscari	Grevillea groundcover sp.	

Reserves

Gardens soften structures in reserves

Reserve gardens should be used generally to highlight main entrances into neighborhood reserves as well as provide an aesthetic backdrop to the reserve's high profile features like playgrounds and barbeques.

The suitability of gardens in reserves should be assessed on a case by case basis. The size of the reserve and the nature of the surrounding environment will dictate whether gardens provide additional value to the available open green space. For example, at small reserves such as Kopu Drive or Karaka Reserve the lawn area should be preserved for play activities. Larger reserves such as Waitaha Reserve have the potential to cater for both needs.

Examples of reserves that may accommodate gardens are Condor Reserve, Faulkner Reserve and Liston Reserve.

A large neighbourhood reserve fronting a feeder road is an ideal location for a reserve garden.

Table of plants for reserve gardens

Preferred plants	Potential plants	Inappropriate plants
Coprosma	Coprosma 'Beatsons Brown'	Abelia
Pseudopanax lessonii	Coprosma 'Painters Palette'	Agapanthus
Pseudopanax crassifolius	Viburnum opulus 'Sterile'	Cytisus scoparius - Broom
Pittosporum sp.	Syringa	Leptospermum scoparium - Manuka
Olearia paniculata	Thryptomene	Cordyline australis
Olearia cheesmanii	Grevillia groundcovers	Rosemary
Lophomyrtus bullata	Pomaderris kumeraho	Lantana
Leptospernum Nanum kea	Luculia	
Azalea evergreen sp.	Kalmia latifolia	
Hebe	Astelia	
Cordyline pumilo	Camellia – selected smaller varieties with single flower	
Hymenosporum flavum 'gold nugget'	Acacia shrubs	
Callistemon –smaller varieties	Banksia shrubs	
	Phormium tenax – in wetlands only	

CHARACTER AREA:

Mount Maunganui

This area covers Mauao to Sandhurst Drive and includes the Matapihi peninsular and Sulphur Point.

The Mount Maunganui character area is diverse in its nature. Starting at the mountain end is the Mount Isthmus area. The Mount Isthmus receives a high number of tourist visitors and is a gateway for visiting cruise ship passengers. Due to the high vehicle and pedestrian pressure, historically the garden shrubberies have required very hardy and adaptable species. The majority are hardy coastal New Zealand natives such as Carex testacea, Coprosma kirkii and flax cultivars with Gazania cultivars used to provide colour.

Gardens immediately adjacent to the Harbour and Coast suffer from sand accretion. The result is that many gardens contain poor quality growing medium, which negatively affects plant quality and longevity.

To compensate for the pedestrian and traffic pressure, trees have been located amongst gardens to provide some physical protection for the plants as well as providing other tree associated benefits such as shade, soil and moisture retention.

Being already developed, there is a limit to the available space for street gardens in the Mount Isthmus area. Visual impact must be obtained through the use of small area, high impact, high quality plantings as opposed to larger gardens used in other areas which are able to achieve impact through mass and scale.

Example of a CBD Garden of Arthropodiums (Native Sub Tropicals) with protection from an adjacent street tree.

The use of both Native and Exotic sub-tropical plantings have been trialed with initial success along the Mainstreet section of Maunganui Road. This use of tropical plants is being complemented by the use of sub-tropical tree species Jacaranda and Pohutukawa and Puka.

This area of Mount Maunganui should have a subtropical theme as well as continuing to provide links with the adjacent coastal dune system through the use of hardy native species on coastal fringes.

The Matapihi peninsular is significantly different to that of the Mount and Papamoa in that this is ex-orchard land with more fertile soils that have better water retention properties. Some screening of the adjacent railway line has been attempted within the rural area of Matapihi Road; however, the species used were not long lived and are now beginning to fail.

Along Russley Drive many of the small splitter island gardens which were initially shared with street trees have been removed due to damage to services, with gardens and trees being replaced with concrete. A number of these islands still exist with gardens in them.

Due to the temperate climate with good soils the use of sub-tropical native and exotic species would thrive. Development will incorporate lush native vegetation such as Puka, Reinga Reinga and Phormium cookianum. This can be complemented through the use of other exotic subtropicals such as bromeliads, Clivia, and Strelitzia. Many of these species do best in semi-shade so the use of specimen trees should be incorporated into garden design wherever possible.

Example of a garden with hardy coastal native species adjacent to coastal dunes.

Example of a tropical garden with lush tropical bromeliads beneath a newly planted Jacaranda tree.

Where development borders the harbor the use of hardy native species will be required. Currently a lack of development has resulted in Matapihi having no street gardens, however as this area develops/intensified more gardens will be required.

In late 2010 the majority of gardens in the Bayfair Estate subdivision were renewed. This involved the use of various hardy exotic and native species, including Leucodendron and Grevillia and Lomandra species.

Example of newly Planted Lomanda 'Tanika' in Bayfair Estate.

Slightly different again to Mount Isthmus, the Mount South area is more arid in nature with recently developed subdivisions and no clear themes. Historically each new subdivision has developed a different palate of species. These have including Agapanthus, Carpet Roses, Guzanias and native shrubs. These gardens will be renewed over time and will take on a more consistent look.

Gardens will provide links with the adjacent coastal dune system through the use of hardy native species including Carex, Coprosma and Muhlenbeckia. However, hardy exotic species should also be used – similar to those used in the Papamoa area to provide variety in form and color. Plants need to be Full-Sun and Drought tolerant.

Significant roads

- Maunganui Road
- The Mall
- Marine Parade
- Oceanbeach Road
- Matapihi Road
- Golf Road
- Concord Avenue
- Gloucester Road
- Hibiscus Avenue
- Sunrise Avenue

Table of plants for street gardens

Preferred plants	Potential plants	Inappropriate plants
Muelenbeckia	Coprosma acerosa	Exotic ice plants
Gazania sp.	Fuschia procumbens	Cape Ivy
Coprosma kirkii	Pingao	German Ivy
Bromeliad sp.	Phormium cookianum cultivars	Agapanthus
Arthropodium	Cordyline cultivars	Boxthorn
Hibiscus	Meterosideros cultivars	Erigeron – Mexican daisy
Strelitzia	Imperata cylindrical	Coleonema
Clivia	Aeonium	Astelia
Myrta sinclairii		Plumbago
Lomandra		Phormium tenax
Libertia		
Ophiopogon		
Leucodendron sp.		

Strelitzia flower and foliage

Reserves

Reserve gardens should be used generally to highlight main entrances into neighborhood reserves as well as provide an aesthetic backdrop to the reserve's high profile features like playgrounds and barbeques.

Coronation Park and Mt Drury

Use of Lush subtropical plants such as Bromeliads, Renga Lily, Clivia, Cordyline cultivars, Abulilons, Hibiscus, Fatsia japonica, Strelitzia (Bird of Paradise) and Cycads beneath canopy trees is recommended. Where there are visible linkages with the ocean the use of hardy native species is recommended to link with adjacent coastal reserves. Species include Carex, Coprosma, and Muehlenbeckia.

Entrance to Bayfair Reserve highlighted with gardens.

Bayfair Reserve

This is large open reserve borders a large industrial area. Historically, the use of native vegetation was used to screen the adjacent large buildings but much of this had to be systematically removed due to the location of underground gas lines. The vegetation screen has been compensated for by scattering various species of specimen trees throughout the reserve.

The Russley Drive frontage comprised mixed species of shrubberies which became overgrown and blocked the majority of views into the reserve. In 2010 much of this vegetation was removed, creating better access and visibility into the reserve.

Sub-tropical plants should continue to be used around road entrance ways and significant locations within the reserve. Many of the access ways are narrow in nature and the use of large shrub species has historically resulted in undesirable social issues.

Grenada Park

This active reserve is soon to be the social and sports center of Arataki. It is adjacent to Baywave, a School, a Community Gardens site, St Johns Ambulance Depot, and Plunket. Historically Grenada Park has been surrounded by large native shrubberies and Australian gums in company with a large security fence which restricted the non-paying public during sports games.

Grenada Park receives a high amount of vandalism, graffiti and other negative social behaviors. All vegetation planting needs to be located to ensure the principles of Crime Prevention Through Environmental Design (CPTED) are followed.

Use hardy native and exotic species such as Grevillea , Banskia, Protea, Lomandra, Loropetalum, Coprosma, and Hebes etc. Species need to be tolerant of pedestrian pressure. Due to sandy free draining soils they also need to be tolerant of summer and lengthy periods of drought or dryness.

The use of hedges has recently been promoted in an attempt to help reduce the graffiti of neighboring boundary fences. Hedges surrounding shared boundary fences may possibly use Escallonia, Photinia 'Red Robin' or other dense hardy shrub species.

Brachyglottis foliage.

Hardy coastal species coupled with trees.

Table of plants for reserve gardens

Preferred plants	Potential plants	Inappropriate plants
Hibiscus	Cycads	Phormuim tenax
Abutilon	Ferns	Romarinus offinalis
Meterosideros cultivars	Alberta magna	
Fatsia japonica	Vireya rhododendron	
Lomandra	Schefflera	
Strelitzia	Frangipani	
Heliconia	Phormium tenax cultivars	
Canna	Bamboo	
Hebe sp.	Monstera deliciosa	
	Acer palmatum cultivars	
	Acuba japonica	
	Gordonia axillaris	
	Vireya sp.	
	Cistus sp.	

CHARACTER AREA:

Papamoa

This area covers Sandhurst Drive to Marjorie Lane and is bounded by State Highway 2 in the west.

This area is characterized by the combination of old holiday baches on large sections and large new houses on highly developed sites adjacent to the beach as well as recently developed residential subdivisions.

Historically, the planting theme of many of the new subdivisions in this area has been to use foliage and flower colour to complement the ocean. Typically many of these subdivisions have developed a visual effect through the use of a few species planted en mass (i.e. the use of rosemary and agapanthus) to create an ocean of blue.

Example of Blue Fescue Grass (Festuca glauca) aiming to replicate the color of the ocean.

Example of Buxus hedges surrounding trees in Palm Beach Boulevard

Papamoa Beach Road (and adjacent roads) was historically a holiday home location, resident plantings were minimalistic and often hardy 'low maintenance' species were used.

Lions Club vegetation plots were established along Papamoa Beach Road and aimed to increase the aesthetic of this area by using hardy native shrubberies and vegetation. More recently, however, due to a lack of infill planting, many of these gardens have begun to fail and are systematically being removed.

More recently subdivisions have used a variety of species including Buxus borders, Carpet Roses, Ivy, Juniper and Agapanthus. In addition the use of natives has increased including Phormium, Coprosma and Hebe cultivars – with mixed success. Many of the gardens in this area have used scale and size to create visual impact. Many of these gardens were installed for the purpose of selling sections rather than for long term public benefit. This issue has now been addressed although the large plain gardens remain. In 2009/2010 a number of large gardens were renewed and reduced in size to align this level of service with surrounding areas.

The use of hardy native species such as Libertia and Coprosma has proved successful at the recent Fashion Island and the Papamoa Library development because these species have been protected through the use of other larger shrubs such as Metrosideros Tahiti and specimen trees.

The use of coastal hardy native and exotic species will be a feature of this area and will reflect the difficult Mediterranean type climate of Papamoa.

Significant roads

- Gloucester Road
- Gravatt Road
- Papamoa Beach Road
- Parton Road
- Tara Road
- Doncaster Drive
- Longview Drive

Table of plants for street gardens

Preferred plants	Potential plants	Inappropriate plants
Leucodendron sp.	Agave sp.	Phormium tenax
Grevillea sp.	Aloe sp.	Palm sp.
Banskia sp.	Festuca glauca	Astelia chatamica
Protea sp.	Euphorbia sp.	Yucca
Lomandra sp.	Punica sp.	Exotic ice plants
Dietes iridioides		Hedera sp.
Coprosma		Agapanthus
Muhlenbeckia		Erigeron
Metrosideros cultivars		Coleonema
Carex –Only to be used to link with Coastal Reserves		Astelia
Escallonia		Plumbago
		Arthropodium sp.

Reserves

Reserve gardens should be used generally to highlight main entrances into neighborhood reserves as well as provide an aesthetic backdrop to the reserve's high profile features like playgrounds and barbeques.

Waterford Downs Reserve being located adjacent to a collector road is an ideal location for a reserve garden.

Waterford Downs Reserve

This is a relatively recent addition to the Council's reserves network; it has not been extensively developed. Currently there are no gardens or shrubberies within the reserve. A mixture of specimen trees are scattered throughout the reserve.

It is clear from the slow growth of the various tree species and through recent excavations that this site has very challenging growing conditions. An exposed site with free draining sandy soil that gets extremely dry in summer means all vegetation must be very hardy.

The use of hardy exotic species is required. Species like Grevillea, Banskia, Protea, Lomandra, Loropetalum, Coprosma and Hebe are suitable for this site.

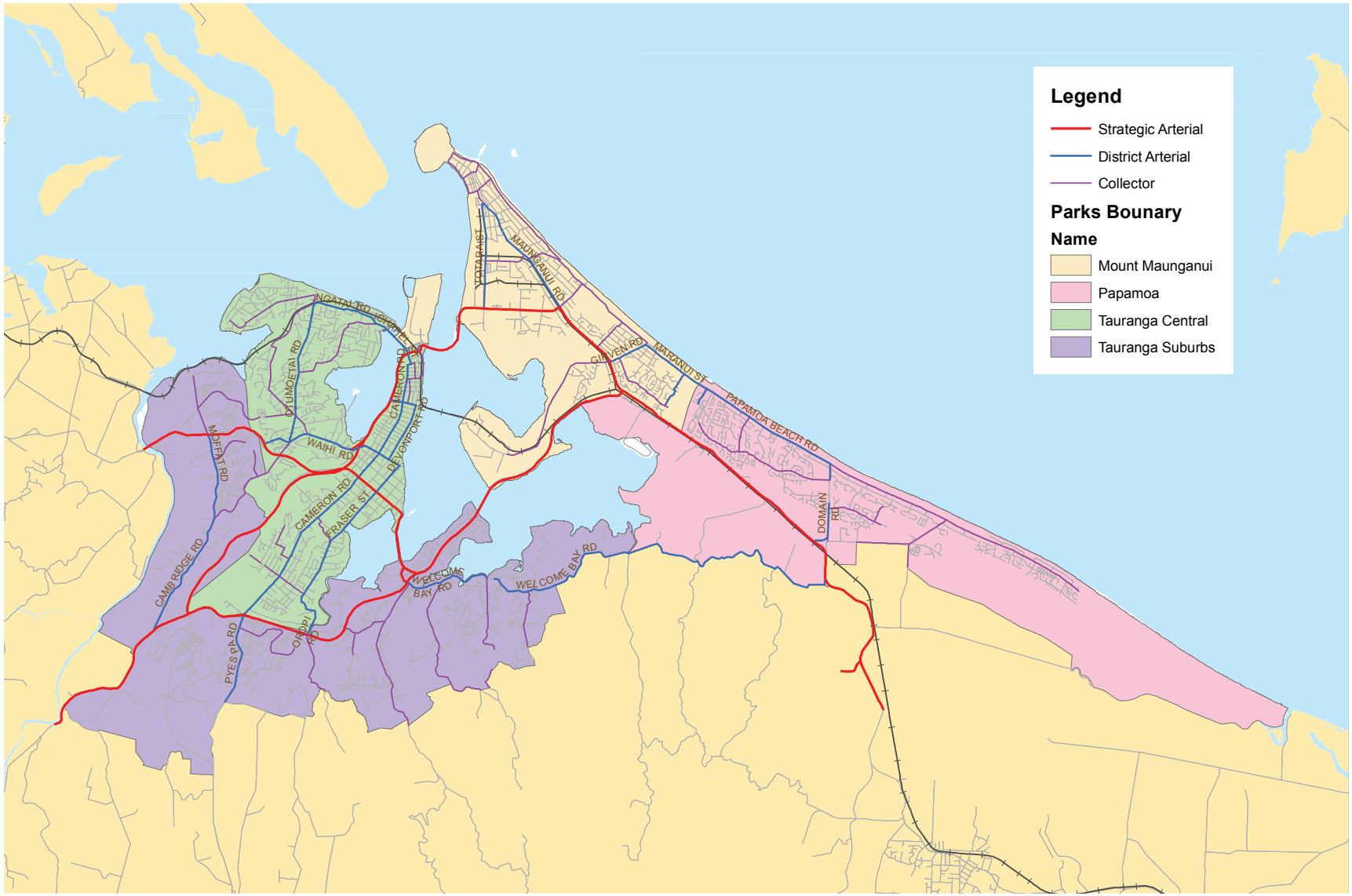
In addition, other longer lasting small-tree species may be used to prolong garden life and impact. Species such as Pinus mugo, Draceana draco, Meterosideros species, Calistemon species and Grevillia species.

Other reserves in this area that may be suitable to have reserve gardens established are Oceandowns Reserve, Hibiscus Reserve and Simpson Reserve.

Lomandra 'little con' and Grevillea 'Mt Tamboritha'.

Table of plants for reserve gardens

Preferred plants	Potential plants	Inappropriate plants
Leucodendron	Aloe (tree aloes)	Phormuim tenax
Grevillea	Kalanchoe	Romarinus offinalis
Banskia	Agave	
Protea	Draceana draco	
Coprosma	Phormium tenax cultivars	
Hebe	Pinus – miniature varieties	
Escallonia	Chaenomeles sp.	
Calistemon	Protea sp.	
Olearia traversii	Kniphofia uvaria	
Corokia		
Loropetalum		
Lomandra sp.		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CAMERON RD
FRASER ST
CAMBRIDGE RD
PYES PA RD
ORDPI RD
WELCOME BAY RD
WELCOME BAY RD
TOTARA ST
MAUNGANUI RD
GLOVEN RD
MATAKUI ST
PAPAMOA BEACH RD
DOMAIN RD

Table of appropriate street tree species BY BERM WIDTH

Botanical Name	Common Name	Berm width			Underground Clearance
		1.2m -1.7m	1.7m - 3m	3m >	1.0m
Acacia melanoxylon	Tasmainian Blackwood			✓	✓
Acer 'Autumn Blaze'	Autumn Blaze Maple		✓		✓
Acer buergerianum	Trident Maple		✓		✓
Acer capillipes	Snakebark Maple	✓			✓
Acer griseum	Paperbark Maple	✓			✓
Acer japonicum	Japanese Maple		✓		✓
Acer negundo	Box Alder			✓	✓
Acer negundo "Kellys gold"	Golden Box Alder			✓	✓
Acer palmatum	Japanese Maple		✓		✓
Acer palmatum 'Bloodgood'	Bloodgood Maple		✓		✓
Acer palmatum 'Osakazuki'	Osakazuki Maple		✓		✓
Acer palmatum 'Seiryu'	Seiryu Maple	✓			✓
Acer platanoides	Norway Maple			✓	✓
Acer rubrum	Red Maple		✓		✓
Acer rufinerve	Redvein Maple	✓			✓
Aesculus x carnea	Red Horse Chestnut		✓		✓
Agathis australis	Kauri			✓	✓
Agathis palmerstonii	Queensland Kauri			✓	✓
Agathis robusta	Queensland Kauri			✓	✓

Botanical Name	Common Name	Berm width			Underground Clearance
		1.2m -1.7m	1.7m - 3m	3m >	1.0m
Alberta magna	Natal Flame Tree	✓			✓
Albizia julibrissin	Silk Tree		✓		✓
Alectryon excelsus	Titoki		✓		✓
Amomyrtus luma	Luma	✓			✓
Araucaria columnaris	Cook Island Pine			✓	✓
Araucaria cunninghamii	Hoop Pine			✓	✓
Araucaria heterophylla	Norfolk Pine			✓	✓
Banksia integrifolia	Banksia			✓	✓
Beilschmedia taraire	Taraire	✓			✓
Brachychiton acerifolius	Illawara Flame Tree		✓		✓
Brachychiton populneum	Kurrajong			✓	✓
Carpinus betulus	Hornbeam		✓		✓
Carpinus betulus 'Fastigata'	Fastigate Hornbeam	✓			✓
Carya ovata	Hickory			✓	✓
Catalpa bignonioides	Catalpa		✓		✓
Cedrus atlantica	Atlantic Cedar			✓	✓
Cedrus deodara	Himalayan Cedar			✓	✓
Ceratopetalum apetalum	Coachwood		✓		✓
Ceratopetalum gummiferum	NSW Christmas Tree		✓		✓
Cercidiphyllum japonicum	Katsura		✓		✓
Cercis canadensis"Forest Pansy	Forest Pansy	✓			✓
Cercis siliquastrum	Judas Tree		✓		✓
Chiranthodendron pentadactylon	Mexican Hand Tree		✓		✓
Cornus florida	Flowering Dogwood	✓			✓
Cornus kousa	Kousa Dogwood	✓			✓

Botanical Name	Common Name	Berm width			Underground Clearance
		1.2m -1.7m	1.7m - 3m	3m >	1.0m
Cornus nutallii	Pacific Dogwood	✓			✓
Corynocarpus laevigatus	Karaka		✓		✓
Cupressus sempervirens	Italian Cypress			✓	✓
Dacrycarpus dacrydioides	Kahikatea			✓	✓
Dacrydium cupressinum	Rimu			✓	✓
Davidia invulucrata	Dove Tree		✓		✓
Drimys winteri	Canelo	✓			✓
Dysoxylum spectabile	Kohekohe		✓		✓
Elaeocarpus dentatus	Hinau		✓		✓
Eucalyptus cordata	Silver Dollar Gum			✓	✓
Eucalyptus ficifolia	Red Flowering Gum			✓	✓
Eucalyptus nicholii	Peppermint Gum			✓	✓
Fagus sylvatica	Common Beech			✓	✓
Fagus sylvatica 'Purpurea'	Copper Beech			✓	✓
Fraxinus americana	White Ash			✓	✓
Fraxinus excelsior	Common Ash			✓	✓
Fraxinus griffithii	Griffiths Ash	✓			✓
Fraxinus ornus	Manna Ash			✓	✓
Ginkgo biloba	Maiden Hair Tree			✓	✓
Gordonia axillaris	Fried Egg Tree		✓		✓
Hedycarya arborea	Pigeonwood	✓			✓
Hymenosporum flavum	Frangipani		✓		✓
Idesia polycarpa	Wonder Tree			✓	✓
Ilex aquifolium	Holly		✓		✓
Jacaranda mimosaefolia	Jacaranda		✓		✓

Botanical Name	Common Name	Berm width			Underground Clearance
		1.2m -1.7m	1.7m - 3m	3m >	1.0m
Juglans nigra	Black Walnut			✓	✓
Juglans regia	English Walnut			✓	✓
Juniperus chinensis 'Kaizuka'	Kaizuka Juniper		✓		✓
Knightia excelsa	Rewarewa	✓			✓
Koelreuteria paniculata	Golden Rain Tree		✓		✓
Lagerstroemia indica	Crepe Myrtle	✓			✓
Larix decidua	Larch			✓	✓
Laurelia novae-zelandiae	Pukatea			✓	✓
Liquidambar formosana	Formosan Sweet Gum		✓		✓
Liquidambar styraciflua	Sweet Gum			✓	✓
Liriodendron tulipifera	Tulip Tree			✓	✓
Liriodendron tulipifera fastigatum	Fastigate Tulip Tree	✓			✓
Lophomyrtus bullata	Ramarama	✓			✓
Lophostemon conferta	Queensland Box		✓		✓
Magnolia 'Galaxy'	Magnolia 'Galaxy'	✓			✓
Magnolia 'Little Gem'	Southern Magnolia	✓			✓
Magnolia 'Star Wars'	Magnolia 'Star Wars'	✓			✓
Magnolia 'Vulcan'	Magnolia 'Vulcan'	✓			✓
Magnolia campbellii	Campbells Magnolia		✓		✓
Magnolia denudata	Yulan Magnolia		✓		✓
Magnolia grandiflora	Bull Bay			✓	✓
Magnolia iolanthe	Magnolia iolanthe	✓			✓
Magnolia macrophylla	Big Leaf Magnolia			✓	✓
Magnolia soulangeana	Saucer Magnolia		✓		✓
Magnolia stellata	Star Magnolia	✓			✓

Botanical Name	Common Name	Berm width			Underground Clearance
		1.2m -1.7m	1.7m - 3m	3m >	1.0m
Malus ioensis 'Plena'	Pink Flowered Crabapple	✓			✓
Melaleuca leucadendra	Cajaput Tree		✓		✓
Melia azadarach	Indian Bead Tree		✓		✓
Meryta sinclairii	Puka		✓		✓
Metasequoia glyptostroboides	Dawn Redwood		✓		✓
Metrosideros 'Maori Princess'	Metrosideros 'Maori Princess'		✓		✓
Metrosideros 'Mistral'	Metrosideros 'Mistral'		✓		✓
Metrosideros excelsa	Pohutukawa		✓		✓
Metrosideros excelsa 'Aurea'	Pohutukawa		✓		✓
Metrosideros kermadecensis	Kermadec Pohutukawa		✓		✓
Metrosideros robusta	Northern Rata	✓			✓
Metrosideros umbellata	Southern Rata	✓			✓
Michelia 'Fairy Magnolia'	Michelia 'Fairy Magnolia'	✓			✓
Michelia 'Midnight Mist'	Michelia 'Fairy Magnolia'	✓			✓
Michelia compressa	Michelia	✓			✓
Michelia doltsopa	Sweet Michelia		✓		✓
Michelia doltsopa 'Bubbles'	Michelia 'Bubbles'	✓			✓
Michelia doltsopa Silver Cloud	Michelia Silver Cloud		✓		✓
Michelia figo	Port Wine Magnolia		✓		✓
Myrsine salicina	Toro	✓			✓
Nestegis Cunninghamii	Black maire		✓		✓
Nothofagus menziesii	Silver Beech			✓	✓
Nothofagus truncata	Hard Beech			✓	✓
Nyssa sylvatica	Tupelo		✓		✓
Olea 'El Greco'	Olea 'El Greco'	✓			✓

Botanical Name	Common Name	Berm width			Underground Clearance
		1.2m -1.7m	1.7m - 3m	3m >	1.0m
Olea europaea	Olive		✓		✓
Olearia paniculata	Akiraho	✓			✓
Parrotia persica	Persian Ironwood		✓		✓
Phyllocladus trichomanoides	Tanekaha	✓			✓
Pistacia chinensis	Chinese Pistachio	✓			✓
Platanus orientalis	Oriental Plane			✓	✓
Platanus x hispanica	London Plane			✓	✓
Plumeria rubra acutifolia	Frangipani		✓		✓
Podocarpus henkelii	Yellowwood		✓		✓
Podocarpus totara	Totara			✓	✓
Pouteria costata (syn Planchonella costata)	Tawapou		✓		✓
Prumnopitys ferruginea	Miro		✓		✓
Prumnopitys taxifolia	Matai		✓		✓
Prunus cerasifera 'Nigra'	Cherry Plum		✓		✓
Prunus laurocerasus	Cherry Laurel		✓		✓
Prunus Sato- 'Shimidsu Sakura'	Cherry		✓		✓
Prunus serrulata	Japanese Cherry		✓		✓
Prunus x yedoensis 'Awanui'	Prunus 'Awanui'		✓		✓
Psidium cattleianum	Guava	✓			✓
Pterocarya stenoptera	Wingnut			✓	✓
Pyrus calleryana	Callary Pear		✓		✓
Quercus canariensis	Algerian Oak			✓	✓
Quercus coccinea	Scarlett Oak			✓	✓
Quercus heterophylla	Bartram Oak			✓	✓
Quercus ilex	Holly Oak			✓	✓

Botanical Name	Common Name	Berm width			Underground Clearance
		1.2m -1.7m	1.7m - 3m	3m >	1.0m
Quercus imbricaria	Shingle Oak			✓	✓
Quercus libani	Laebanon Oak			✓	✓
Quercus palustris	Pin Oak			✓	✓
Quercus petraea	Sessile Oak			✓	✓
Quercus robur	English Oak			✓	✓
Quercus robur 'Fastigiata'	Fastigate English Oak	✓			✓
Quercus rubra	Red Oak			✓	✓
Quercus suber	Cork Oak			✓	✓
Rhododendron arboreum	Rhododendron		✓		✓
Sciadopitys verticillata	Umbrella Pine		✓		✓
Sophora microphylla	Small Leaved Kowhai	✓			✓
Sophora tetraptera	Large Leaved Kowhai	✓			✓
Stenocarpus sinuatus	Firewheel Tree	✓			✓
Taxus baccata	Yew		✓		✓
Thuja occidentalis pyramidalis	Thuja			✓	✓
Thuja plicata	Western Red Cedar			✓	✓
Tilia cordata	Small Leaved Lime		✓		✓
Tilia tomentosa	Silver Lime			✓	✓
Tilia x europaea	Common Lime			✓	✓
Tristaniopsis laurina	Water Gum	✓			✓
Ulmus procera	English Elm			✓	✓
Vitex lucens	Puriri		✓		✓

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